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SHOP FRONTS (PLATES LXV-LXXVI).

ONE of the most interesting developments in architecture in New York City in the past ten or fifteen years has been the reconstruction of the old fashioned four story and basement brown stone houses, into shops with offices above. Sometimes the walls of these old buildings have been all that was left of them, sometimes the buildings have been torn down completely, and new buildings erected in their place, and in a third class, the heights of the first and second floor have alone been altered and the floors above left in their original position. The results in many cases have been surprisingly good, and they are perhaps as a whole better designed than the larger loft buildings and office buildings of the city. Curiously enough no particular type seems to have developed itself as the logical and proper one to use, and as the illustrations in this month's issue of ARCHITECTURE show they vary very greatly, ranging from the shop building at 3 East 48th Street of the early French Renaissance school to the Georgian shop of Mrs. Osborn and the German Hofbrau Haus. It might be thought that greater uniformity in the character of the buildings would be on the whole more pleasing, but the variety and picturesqueness which these interesting and unexpected buildings lend our streets, give somewhat the air of a more sober Luna Park, to New York,which is not far from expressing its true character.

One reads in all the novels and romances written about New York that no one is acquainted with his next door neighbor, and certainly none of these buildings appears to have even a nodding acquaintance with the one it rubs elbows against; and when one discovers such an extraordinary conjunction of styles as the Georgian of Mrs. Osborn's shop and the piece of "Rothenburg on the Tauber" next to it, one does not know what to expect next. Personally I do not believe there will be any next, the worst possible mélange is already here. Of course, in most cases the conjunction of unusual styles is not so close as would appear from the pages of this magazine, while there are some block fronts—for example, the south side of Fortieth Street facing the Public Library—whose character is to us at least extraordinary, many of the soberer buildings are not far out of harmony with their neighbors, and, excellent in themselves, shine by contrast.

The materials of which they are composed comprise about the full line known to the architect, except wood, which is "hors concours" by order of the building department. Even that has been imitated in the Hofbrau Haus. We have limestone, marble, brick, stucco and stucco's sublimated expression, sgraffito; but as to which is the proper one to employ we have no clue. Each is an exponent of very high quality of design and after all it is probably the design, and not the material which counts. My personal preference is perhaps for Mrs. Osborn's shop at 24 East 46th Street, designed by Warren & Wetmore, which is probably familiar to most architects. The basement has been kept at the height of the original building and the old parlor floor is still the main one. The manner in which the entrance doorway has been treated, necessarily in a building of this kind a forced arrangement, is as agreeable as any I can call to mind, while the simple and unstudied manner in which the stories above have been designed leaves little to be desired. The balustrade and cornice with an attic story above has reduced the parts of the building to the more or less domestic scale of Colonial work, and the secondary cornice surmounting the attic is both very simple and very charming.

The shop building for Black, Starr & Frost at Fifth Avenue and 46th Street, also designed by Warren & Wetmore, has the good qualities of Mrs. Osborn's shop translated into a different tongue, and unfortunately no photograph can do the building justice, since it cannot reproduce the exquisite coloring of the black and gold marble of the first story, the gilded capitals of the Corinthian pilasters and the soft coloring of the stone above. The detail is kept as flat and light as possible and the building is certainly as delicately, one might almost say daintily handled, as any in New York, it presents a very marked contrast to the sort of French architecture that the same architects used to do in the days when the New York Yacht Club was designed. The Fifth Avenue façade of this building is perhaps the best twenty-five feet of design in New York; and the building is, like Mrs. Osborn's shop, a very true characterization of its purpose; it could hardly be anything else than a jewelry store of the very finest kind, and should completely fulfill John Ruskin's dictum that the perfect building is that which perfectly explains its purpose.

Going on this principal of every style its own sign, the Hofbrau Haus is perfect. It certainly is a piece of Germany set up in New York and the eccentric methods of the old German builders have been assimilated rather than copied by its designer. One cannot take it very seriously and it is probably not intended to be taken seriously, but it is an exceedingly decorative and interesting side light on cosmopolitan New York. The two portions of the 30th Street side were built one after the other by remodeling the old house and the fact that the architect has made no attempt to continue his design through the two portions is so unusual and so thoroughly German that it is more than surprising. The photograph, as in the case of Black, Starr & Frost's shop, does not do the building justice, since it brings out the reds, and the dark colors of the wooden trim in much sharper contrast with the dull gray surface of the stucco than is actually the case. These buildings are really comparatively quiet and subdued in color and though it is impossible to deny that the design is bizarre in the extreme, in the hodge podge of Broadway they are extremely noticeable.

The most unusual of all the examples in this article is Alexander's shoe shop at 548 Fifth Avenue designed by Carrere & Hastings. The front is almost entirely of sgraffito work with marble and limestone window trim, a heavy projecting cornice and the suggestion of a green tile roof. Without the very wonderful decoration of the stucco the building would probably not amount to very much, but it was after all designed as a background for sgraffito and as such it is extraordinarily successful. One can study the exquisite Italian Renaissance designs which cover almost the entire building for a long time without exhausting their possibilities, or getting tired of searching for others, and while the name of the designer who made them is not known to me, he should be credited with a very great portion of the success of this very lovely building.

Another building on which sgraffito is used is 19 East 57th Street designed by Hunt & Hunt in which the color decoration was applied to the wet stucco by William E. Mackey, following sketches by the architects. It is to be regretted that the loveliest part of the decoration, the two women's figures in the top story, are as a rule not seen from the street, and the four stories between the shop front and the attic are plain and undecorated. The treatment of the entrance and the shop window which is shown on the full page plate is unusual, in that no moldings of any sort have been employed, but the colored bands take their place. The scheme has been here so successful that we may expect to see it widely imitated in the next few years.

Two buildings by Charles C. Thain, one at 3 East 48th Street and one at 20 East 46th Street, each of them excellent of its kind would seem to indicate considerable uncertainty in the designer's mind as to which style he should employ, and perhaps when one can design so well in both styles such hesitation is no more than natural. Of the two I greatly prefer 3 East 48th Street which is a very excellent piece of construction in the early French Renaissance style with a large proportion of window openings and yet without loss of appearance of stability. From the bottom to the top the building hangs together better than most of its type where tremendous glass area is required in the first story with comparatively large portion of masonry work above, and the shapes and grouping of the windows are not only agreeable in each floor, but are admirably composed to form a dignified and unified whole. It is a building whose good qualities are not as conspicuous as some of the others of which we have spoken but the more carefully one studies the elevation the more clearly one perceives its fitness for its purpose, and the excellence of its design.

The other building by the same architect is an extremely amusing adaptation of the German, but presents a very strong contrast to the first, in that there is noticeable a certain stagey and artificial quality throughout. The blinds, if regarded as spots of color have their purpose I suppose, but it is so very evident that they cannot come anywhere near filling the windows they flank, that it would seem some other type of decoration might have been employed to better advantage; and the manner in which the central pier comes directly over the main entrance to the building is to be deplored. As before said it is amusing rather than serious architecture.

The shop building at 3 West 36th Street for Proctor & Company designed by Hill and Stout, is again quite of another type, the tall pilasters and cornice being Neo-Grec in feeling while the attic declines to consider itself as belonging to any recognized school. The designers were up against the same old problem in their endeavor to build four stories of masonry above a glass front and while they have masked the conjunction between the masonry and the glass as well as possible with an iron balcony, while the details of the first and second stories are charming, and while the color of the brick and the treatment of the pilasters on the next three is most agreeable, the building as a whole does not hang together quite as do some of the others. It is in the color scheme that this shop is most successful, and the architects have used a brown toned brick which is both soft and brilliant and which softens in reality the contrast between the lower two stories and the upper floor much more than is evident in this illustration. One point to be considered in designs of this type of buildings is very well illustrated by this example. That is the fact that the shop front and the upper stories are seldom seen together. I have seen and admired this building a dozen times, and have never been worried by the lightness of the lower part as I have since I have seen this illustration. Designers of buildings in a narrow street always meet the problem of scaling the upper part sufficiently to count from a distance while the lower stories can almost be considered as a distinct proposition.

The two-story structure at 5 West 44th Street designed by Gregory P. Webb, is of stucco, with a heavy cornice, small iron balconies in front of the windows at the second story, and a large show window below. In spite of the large show window a sense of strength has not been lost, probably because one recognizes at once that a single story of masonry could easily be carried by a girder. It is a very picturesque little structure whose good qualities are due not to any eccentric and unusual features, but to the purity of its proportions, and to its absence of ostentation. The shapes of the window and door openings, and of the show window, while absolutely unlike, do somehow fit together. The balconies are just the right size, and the cornice of exactly the type which should crown the façade. The key-note of its design is a sort of straightforward simplicity which is much more interesting than the average of its more important neighbors.

The other two buildings illustrated, designed by McKim, Mead & White and J. H. Freedlander are of buff limestone in very plain and simple architecture, one of the Italian and the other of the French classic school. They possess no unusual or outré features, but a good, straightforward design of excellent character for buildings of this type. Their designers have not sought for precedent in the most unusual styles or those commonly regarded as least suited to this type of structure but the buildings are not for that reason less attractive. They are good, clean, straightforward pieces of work and as artistic as they are practical. All of these buildings should be far more interesting to most architects than the average run of work illustrated in the architectural press, because they are about as good as any of the structures recently erected in New York, they present a wide variety of opinions as to what constitutes good design for this type of building, and the problem is one as frequently presented to the architect in the small city as to that in a large. Not many of us have post offices or public libraries to design; but there is hardly one in the profession who at some time has not had a small store building or loft building put up to him. I wish that some conclusion as to the appropriateness of various styles to the problem could be reached, but there seems the widest possible divergence among the various examples and at least three of them are superlatively good and of quite different types. The only thing which one can say with any certainty is that all of these buildings could hardly have been constructed elsewhere than in the United States, or designed by other than American architects. We can call them French or Italian or Georgian as we like, but it is perfectly apparent that they are not the work of French, Italian or English designers, and I think the most unusual and most encouraging feature of current American work of all kinds is that it possesses a distinct character of its own.

We have gotten past the age of copies and while we freely adapt to our needs whatever the art world of the past has to give us, it is an unusual adaptation, widely different from the original style and deeply impressed with the ear marks of this generation and this country. Sometimes it seems as if we could fairly say that we have a single definitive type of work, which we can call American; at other times we find types of building so very different that the world refuses to consider them as belonging to one school, and yet they clearly belong to no other school than the American. What the outcome will be it is impossible at the present time to guess, but we who are working in a real Renaissance of architecture can perhaps hardly be expected to see clearly the goal toward which we are aiming.

CORRESPONDENCE.

Owing to the number of inquiries which ARCHITECTURE receives from time to time, some of which appear to us to be of very general interest, we intend to publish such questions with their answers monthly. Where a definite and accurate answer is possible this will be made, but where the answer is largely a matter of opinion we can give only what seems to us a consensus of the best opinion. We invite criticisms.

Editor of ARCHITECTURE,

SIR: I understand that some time since, there was a symposium of architects as to the ten best buildings in America. Can you inform me as to where this was published and what was the result? Yours very truly,

C. P. A.

We find no record of such a symposium. We have addressed inquiries to a few of the architects practicing in New York and the following list is the result of a majority vote:

1. New York City Hall.
2. Capitol at Washington.
3. The Rotunda at the University of Virginia.
4. Morgan Library, New York.
5. University Club, New York.
6. Trinity Church, New York.
7. Independence Hall, Philadelphia.
8. Columbia Library, New York.
9. Chapel at West Point.
10. Trinity Church, Boston.

It may be interesting to note that of these buildings four were designed by McKim, Mead and White, and that also the Gorham Building, Grace Church, St Paul's Chapel, the Boston Public Library, The Rhode Island State Capitol and the Madison Square Garden Tower, were suggested. There seems room for discussion as to whether a similar list compiled by architects not in New York would not result differently, and also as to whether the veneration inspired by age has not influenced the vote on certain of the buildings.

Editor of ARCHITECTURE,

SIR: I have been very much interested for a long time in Colonial work and one of my architect friends tells me that you can probably inform me as to some points in which I am interested.

Who was the first architect practicing in the United States, and what buildings did he design?

Is it true that Thomas Jefferson was an architect? And can you inform me also as to whether Sir Christopher Wren ever designed any of the American buildings?

Very truly yours,

J. C. JR.

The "Georgian Period" in an article written by George C. Gardner states that strictly speaking 'up to the beginning of the 19th century there were no architects in America,' but John Allys who practiced from 1655 to 1700 was certainly a designer of some merit, and also called himself an architect. Kings Chapel, Boston, which was built in 1690 was designed by Mr. Harrison of Rhode Island: the earliest American building still existing erected by the English emigrants is St. Luke's Church at Smithfield, Virginia, which was built in 1632 and built by one Captain Bridges. If he called himself an architect, he was certainly the first in America.

As to the second part of the inquiry: Thomas Jefferson was not an architect in the modern sense, in that he did not make his livelihood from the practice of architecture, but that he was an architectural designer of great merit, with an excellent knowledge of construction is proven by the buildings which he designed and supervised at the University of Virginia. His drawings for these buildings are still extant and were made at a very small scale, and are what would now be called sketches.

He also supervised the construction of a kiln in which the brick were made for these buildings and directed the work of the mechanics in great detail. He may be fairly called an architect.

It is very improbable that Sir Christopher Wren designed any American building. We believe it has been asserted that he designed one of the Boston churches, Trinity Churches at Newport and the Bruton Church at Williamsburg, Va., but there is no documentary evidence in either case and the internal evidence of the buildings themselves should refute the theory to any one familiar with Wren's work.

Editor of ARCHITECTURE,

DEAR SIR: Who is generally regarded as the most famous living American architect? Very truly yours,

L. M. T.

At the present time there is probably no American architect who is generally conceded to stand at the head of the profession. Previous to Mr. McKim's death he was so regarded, and for a time before this Mr. Richard M. Hunt, to whom must be credited a large share in the formative period of modern American architecture occupied this position. Slightly antedating Mr. Hunt, Mr. H. H. Richardson in his specialty of Romanesque held this place. At the present time the general standard of excellence among the architects is so high that it is impossible to predicate the judgment of the future, although it may quite conceivably be in favor of Mr. C. A. Platt or the firm of Cram, Goodhue and Ferguson, each of whom is pre-eminent in his comparatively limited line.

Editor of ARCHITECTURE,

DEAR SIR: Can you inform me as to who won the Gold Medal at The Architectural League last year, and who gives these medals. Yours very truly,

L. H. C.

We suppose that you refer to the Medal of Honor in architecture which is given annually at the exhibition of the Architectural League of the City of New York to that important work exhibited which has been constructed during the preceding five years and is shown at this exhibition. The medal is given by the New York Chapter of the American Institute of Architects and a committee from the Chapter decide its award. The Medals of Honor of the New York Chapter have been awarded as follows:

1906 Carrere and Hastings for a residence at West End, New Jersey.

1907 McKim, Mead & White for the Madison Square Presbyterian Church, New York.

1908 Pell & Corbett for the Maryland Institute, Baltimore, Maryland.

1909 Trowbridge & Livingston for the Phipps house, New York.

1910 P. & M. Le Brun for the Metropolitan Tower, New York.

1912 Charles A. Platt for several country houses.

In 1911 there was no award.

Editor of ARCHITECTURE,

DEAR SIR: Has any American architect been called upon to construct an important building in a foreign country?

Yours very truly,

M. C. G.

If we except Canada, Mexico and the Philippines the answer is probably no. We understand that the late Bruce Price made designs for the Imperial Palace at Tokio, but these drawings were not executed. There have been a number of buildings in Japan designed by American architects but none of much merit.

THE NECESSITY FOR SPECIAL PREPARATION FOR THE PRACTICE OF LANDSCAPE ARCHITECTURE.

CHARLES W. LEAVITT, JR.

THERE is so much dependent upon a correct beginning in any development and as the foundation upon which to build up a design almost invariably has to do with the forces of nature, we find ourselves in need of the civil engineer, for surveys, profiles, cross sections, calculations of quantities, the design of dams, bridges, water supplies, drainage, etc., etc., at the very beginning. If interested in these subjects, then one should have the training of an engineer and thoroughly understand them. If we are only interested in them on account of their necessity to the profession of landscape architecture, then we may simply familiarize ourselves with these subjects sufficiently to enable us to understand the meaning of a boundary and topographical survey, how to lay out a road and work up the profiles and cross sections of it; how to calculate quantities, fix grades, plan excavations, etc. The design of dams, bridges, water supplies and other more important engineering work should not be attempted without the assistance of a civil engineer.

The engineer deals in such practical problems and is so bound by the laws of mathematics and definite quantities that the usual indefinite ideas of the artist, which frequently lead to trouble when one attempts to carry them out practically, must be largely corrected by the knowledge of engineering; and I, therefore, advise as much study of engineering as possible for the man who wishes to practice successfully the profession of landscape architecture or, more strictly speaking landscape engineering.

Next to engineering, for the landscape man, architecture seems to be the most important of the foundation studies. It is not as definite as engineering and deals more in the outward and inward appearance than in the strength and durability of materials and structures and therefore inclines more to the artistic. The study of architecture is largely the development of one's artistic temperament and ability to design, and comprises the same general studies as one endeavoring to develop himself for landscape engineering, although architecture is handled from a scale point entirely different from the design of things outdoors and it is not safe, therefore to work too closely on the heels of the architect but simply to utilize his laws and principles of design.

In handling designs for the development of natural effects, one must live in an atmosphere of bolder outlines, both general and in detail, than in the design of a building. It seems impossible that one should study and work in a fine scale most of the time without becoming so addicted to this scale as to make it difficult, if not impossible to see, feel and work in the broad flowing lines of nature. While pursuing the study of architecture and design which is so necessary for the landscape architect, it is necessary to live with nature sufficiently to keep in mind and instill into one's sense of proportion, the scale of nature. This is distinctly difficult to understand, as from a small scale we drift by degrees into a bold scale and half way between the two a neutral point is reached. This neutral point is the center of the danger zone for both architects and landscape men and the work of each should be kept away from this point if one's work is to be characteristic and true.

It is never too soon to begin the study of landscape effects and the child should be taught the rudiments of botany and if properly learned, this information will be of great value through life as the principles upon which all plant life depend are about the same. The germination and development of the seed of the frailest plants, which one as a child becomes familiar with, is much the same as the germination and growth of the mighty monarch of the forest. We can go back to these first lessons and find in them such wisdom. We know that the violet grows best in some damp shady place. That the iris thrives in the water and that most of the lilies and soft fibrous plant are dependent upon much moisture, while the daisy, golden rod and aster are found in the upland meadows. We should never plant them in the reverse places without either drainage on the one hand or an artificial supply of water on the other. We learn that the deciduous trees drop their leaves in the winter and therefore are not subject to so much evaporation as the coniferae, which hold their leaves through the winter and will suffer severely if the ground in which they stand should be frozen sufficiently early to prevent their getting a water supply for the winter and early spring.

We learn that the willow and many soft wooded trees grow from slips; the oak, hickory and most hard wooded trees are started from seed. These are the lessons learned during the daily walks of childhood and yet they are the fundamentals of planting, upon which the landscape architect depends for his effects. Botany should be understood by every landscape architect as well as the principles of farming. In the development of the landscape the farm is the background and supplies the broad masses of color which fill up the greatest proportion of most landscapes and it also is the life and interest of the picture as farming means work and activity and the principles of farming are essential for basing plans for the development of the country.

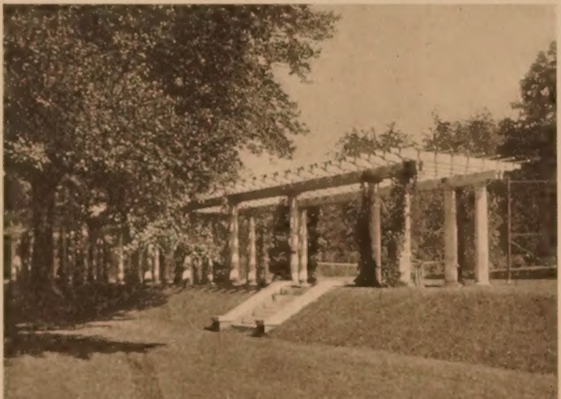
Whether it is for the broad commercial effects of the forest or the decorative results of horticulture, a knowledge of the trees must be learned. We can study them in the woods, in the developed park, in an arboretum, or in a nursery or forest reservation which may have been scientifically created. The more we study the more we will find to interest us in the trees. They are wonderful in summer and perhaps more interesting in the winter when we can see and study more readily their construction. They change from day to day, so that we have the interest of variation. Study each tree under various climatic conditions as the same variety in the south may look different in the north. The Colorado blue spruce, while beautiful in its native State, is much more wonderful when grown in the east. The trees, shrubs and plants are the paint on the palette of the landscape architect with which he colors the picture he has drawn on the landscape with the knowledge of the engineer and the artistic ability of the architect and carried into effect through the efforts of the laborer. It is necessary that he be bold in his drawing to have the picture hold in proper proportion a grove of mighty oaks, a large dam or bridge, a group of buildings, a waterfall, a lake, a river, a garden or a terrace, these require a large palette and a hand of strength to place them in harmonious relationship.

The engineer may know the strength of materials, the

1. REINFORCED CONCRETE BRIDGE WITH STONE FACING.

architect the materials which will give him the effect he wishes to produce in his building and when those materials are in place, if they have been in accordance with established rules, they will stay where they are put and the effects originally produced will be maintained. Not so with the trees, shrubs and plants; they grow. Whether they grow well and produce the effects desired by the landscape architect depends largely upon the soil in which they are planted. Upon the soil there depends the growth of the planting and the same soil acts differently in different climates and again in a different manner when wet and when dry and all these variations affect the results of the plantations. From these complex results one begins to understand the very great importance of a knowledge of the soil about which comparatively little is known. Soil should be understood and this knowledge can only be obtained by careful observation and experiment as it is difficult to recognize one soil from another unless one has actually handled them. Of course, the properties of the soil can be determined by analysis but then one must be able to know how to use the results of the analysis, which only comes from practical experience.

In close connection to the study of the soil comes the advisability of a certain amount of knowledge of Geology to enable one to appreciate natural rock formations and conditions which often affect the carrying out of our designs very materially; for example, if a locality has a fine native granite rock it would seem natural to build a house and garden walls, steps, etc., out of that rather than imported sandstone or concrete. Generally speaking native material when durable should always be used as it has individuality and ties the buildings to the surrounding country effectively.



2. PERGOLA OVERLOOKING TENNIS COURT.

As a sequel to our studies in Botany, we should apply and increase our knowledge of plants and planting from an artistic point of view. Differences of leaf formations in combination with one another, autumn color schemes, characteristic twig and branching habits, values of fruits and berries from ornamental view point, winter aspect of vegetation, all require careful and intelligent study and observation, if we are to utilize them to present pleasing pictures.

The same laws of arrangement and color combinations are equally true in regard to flowers and the flower garden, as well as trees and shrubs. More than half the responsibility of every success or failure in landscape work rests upon the planting.

In the flower garden we must not only know the flowers themselves and their artistic arrangement but we must be able to get a continuity of bloom and a healthy and vigorous growth which comes only from long and patient study of the individual plants and their soil, moisture, sun and climatic preferences.

Having mastered in a general way the contributary studies already discussed we are able to begin special work in solving landscape problems of design, applying the knowledge already gained and fitting theory to idealistic practice. These first problems, which may be given to the student, should be solved in a very broad manner and from a very idealistic standpoint, that the student's future ideal may be always high, no matter how often it has to be compromised to meet practical needs and the ideas of clients. In this way a very broad and high conception of the whole profession is gained and if the student continues to be a student through practice and experience it will be retained and developed.

3. MODEL LAYOUT OF FARM BUILDINGS.

There is no better way of keeping up one's artistic freshness and vigor of imagination, appreciation and expression than the possession of some artistic hobby, whether it be music, sculpture, painting, sketching, photography, travel or outdoor sports. Any of these will tend to surround us with an artistic atmosphere in which we can grow and attain our greatest possibilities. Let beauty in every form occupy an important part in the life of the student that his own artistic taste and love of nature may be developed to its greatest capacity, that clients and friends may feel such influence, and benefit by association with one thoroughly developed in such an atmosphere.

COURT HOUSE BOARD.

Morgan J. O'Brien, Chairman; L. Laflin Kellogg, Secretary; Edward M. Grout, E. Clifford Potter, Charles Steckler. Walter Cook, Consulting Architect.

115 Broadway
New York, May 24, 1912

DEAR SIR:

I am instructed by the Court House Board to make the following announcement:

The Court House Board, under authority of chapter 336 of the laws of 1903, as amended, is about to proceed with the preparation of plans and specifications for the erection of a Court House, to accommodate the Appellate Term, the Special and Trial Terms of the Supreme Court of the State of New York, appointed to be held in the County of New York, the City Court of the City of New York, the County Clerk, and the Commissioner of Jurors, including a Library or Libraries and private Chambers for the use of the Justices. The site selected for the Court House, which is now under process of acquisition, is bounded by Leonard street, Baxter street, Park street, Duane street, and La Fayette street, Borough of Manhattan, in the City of New York.

The Board has authority to employ such architect or architects as it may deem advisable, and may fix their compensation; and may, in its discretion, provide for compensating architects, whom it may invite to prepare any such plans even though such plans shall not be adopted by it.

The plans and specifications prepared by the architect finally selected, must first be approved by a majority of the Justices of the Supreme Court, residing in the First Judicial District, and assigned at that time to hold terms in said Court; they must then be definitely approved by the Court House Board, and finally by the Board of Estimate and Apportionment of The City of New York.

The Court House Board, at its meeting of May 10, 1912, adopted the following general plan of a competition for the selection of an architect:

> "*Resolved*: That the general plan of the competition for the selection of an architect shall be as follows:
>
> "Ten (10) architects of prominence shall be invited by the Board to enter the competition; and ten (10) other architects shall be selected to enter this competition, whose designs shall be adjudged as the best after a preliminary competition is held therefor, which shall be open to all architects practicing in Greater New York, who shall have shown to the Board satisfactory evidence of sufficient experience by executed buildings; and that the twenty (20) architects to be so invited and selected shall be paid a certain compensation."

The Board subsequently appointed the following architects, who have consented to serve, as a jury of award in the proposed competitions:

R. S. Peabody, Esq., of Boston,
Frank Miles Day, Esq., of Philadelphia,
J. L. Mauran, Esq., of St. Louis.

The Board, at its meeting held on May 17, 1912, selected the following ten architects, or firms of architects, to be invited to enter the proposed competition, the selection having been predicated upon both professional standing and experience, and special fitness and experience in executed work of this character:

McKim, Mead & White,
Carrère & Hastings,
La Farge & Morris,
Tracy, Swartwout & Litchfield,
James Riely Gordon,
H. V. Magonigle,
York & Sawyer,
Charles Butler & Charles Morris, Associated,
Trowbridge & Livingston,
A. W. Brunner.

PRELIMINARY COMPETITION.

The Board will hold a preliminary competition for the purpose of selecting ten additional competitors in the final competition.

Any architect having had, since January 1, 1912, his principal office in the City of New York, who may desire to compete in the preliminary competition, must send his name, office address, and a statement of his qualifications to the Court House Board, Honorable L. Laflin Kellogg, Secretary, 115 Broadway, New York City, on or before June 20th, 1912. No letters from other persons must accompany these statements.

These names and statements will be examined by the Board, and every architect who shall be adjudged to have given satisfactory evidence of sufficient experience by executed buildings, and of competence to deal with the problem, will be notified that he is accepted as a competitor in the preliminary competition; and each of these will receive at the proper time a programme of the preliminary competition. This programme will also be sent to the ten architects named above as invited competitors in the final competition for their information.

The designs submitted in the preliminary competition will not be made public or be shown to any of the competitors in the final competition.

The authors of the ten designs submitted in the preliminary competition considered as the best by the jury will be invited to submit designs in the final competition, together with the ten architects already invited; and the author of the design selected as the best in the final competition will be appointed architect of the building.

To each one of the twenty competitors in the final competition, excepting the successful one, the sum of $1,000 will be paid in compensation for the preparation of such plans.

The word "architect" as used herein, includes an individual, firm and corporation.

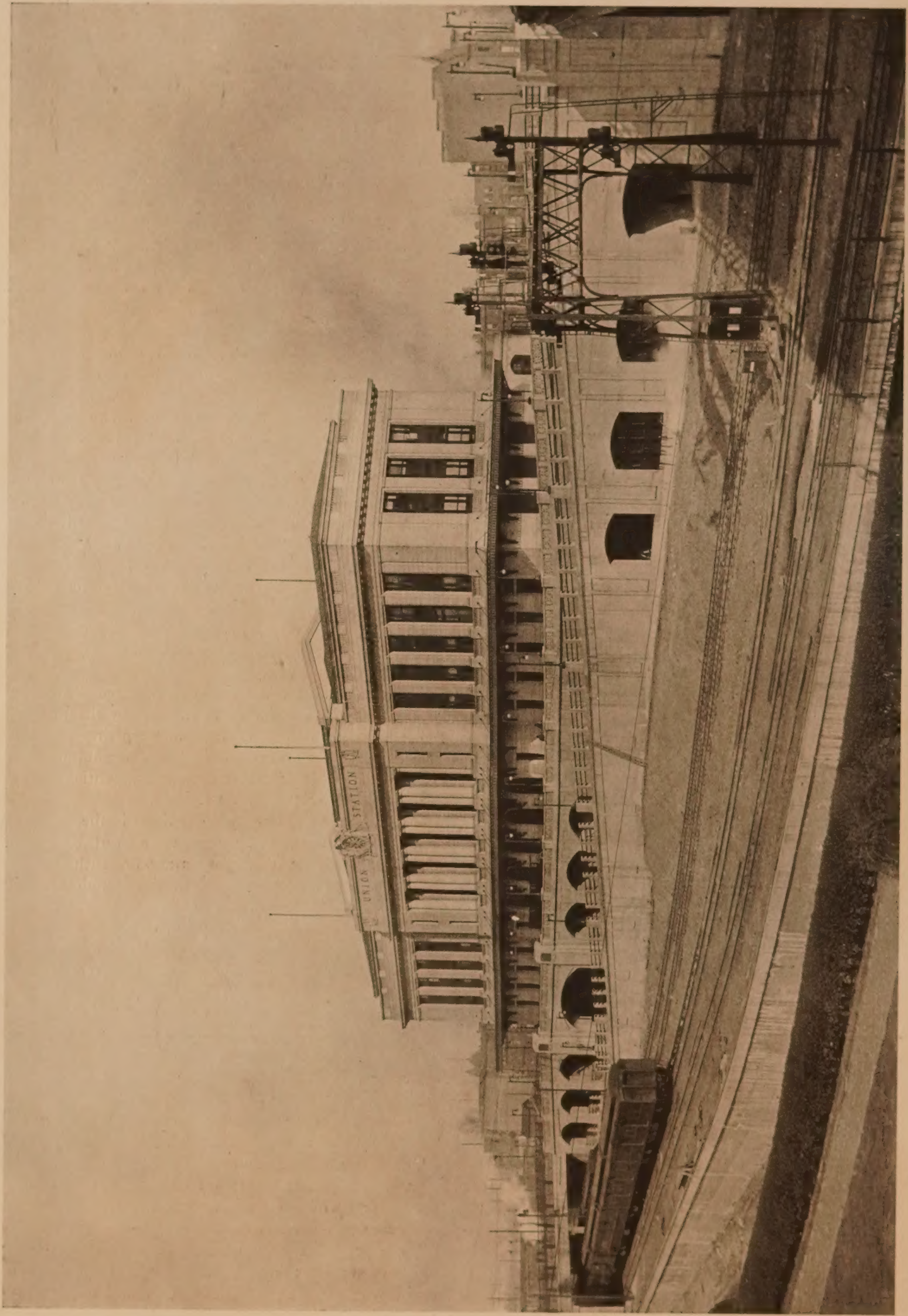
Very respectfully,
L. LAFLIN KELLOGG,
Secretary.

OIL-MIXED PORTLAND CEMENT MORTAR AND CONCRETE.

LOGAN WALLER PAGE, M. AM. SOC. C. E.

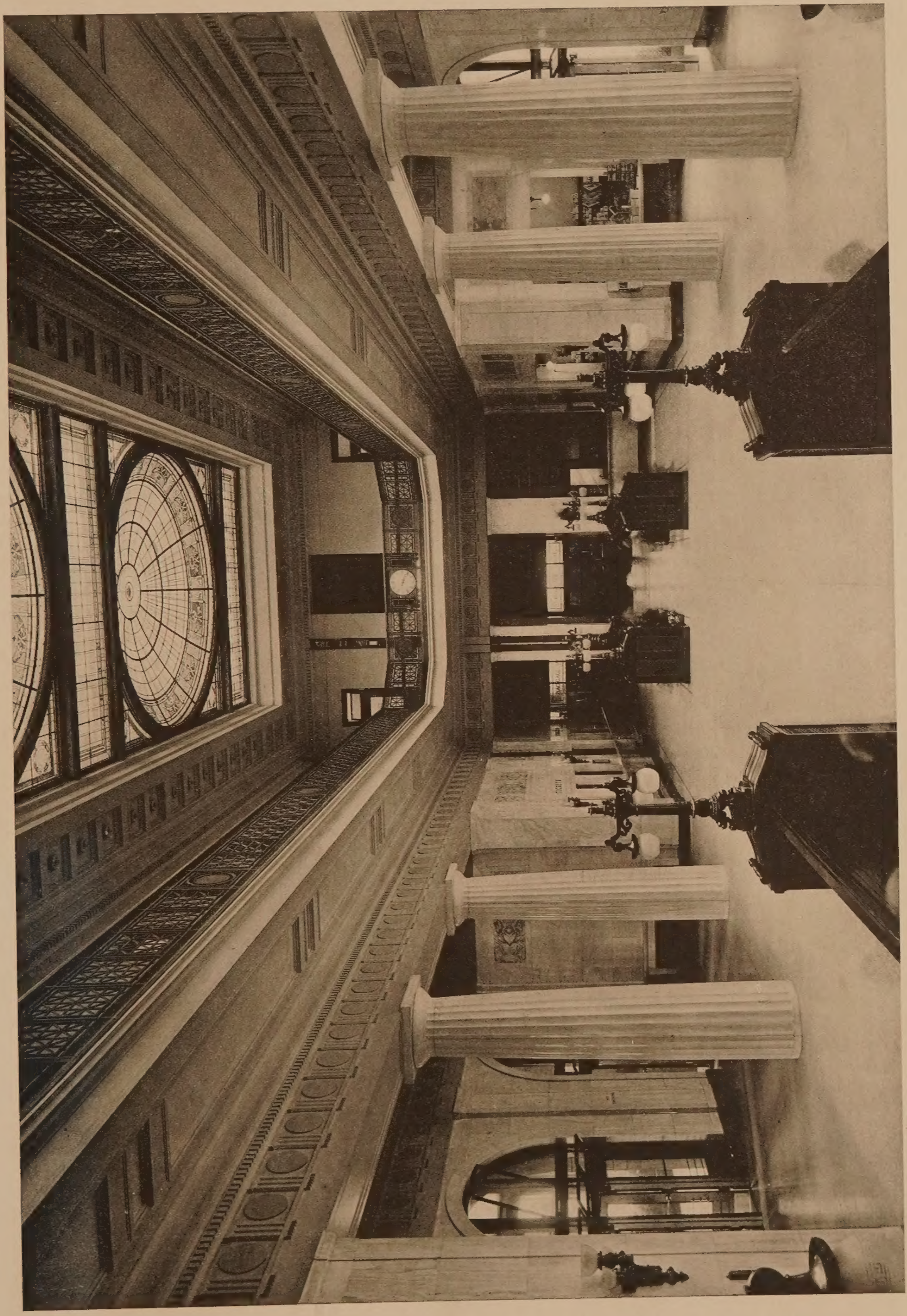
IN October, 1909, the writer found that oil in considerable quantities could be combined with wet Portland cement paste by a simple mixing process. It was noted that when oil was added to wet cement, it disappeared completely when mixed for a few moments, and, furthermore, that there was no apparent separation of the ingredients upon setting. Experiments were at once begun with various kinds of oil, to ascertain which was best adapted for the mixture. After these preliminary inquiries were completed, the following tests were conducted, or are now in progress, in order to investigate the properties of oil-mixed cement, mortar, and concrete: (1) The tensile strength of neat cement

Continued page 105)



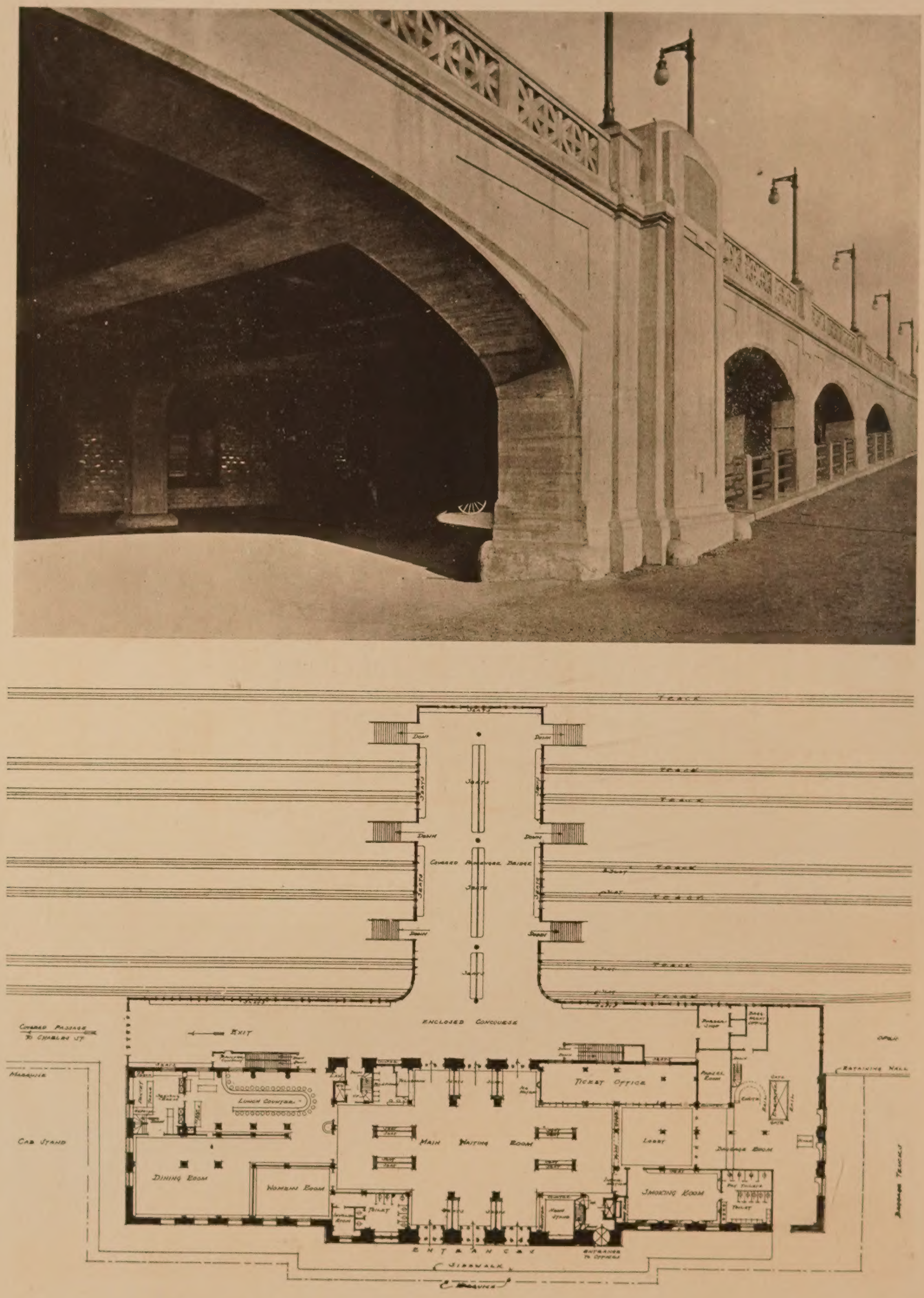
UNION STATION, BALTIMORE.

Kenneth M. Murchison, Architect.



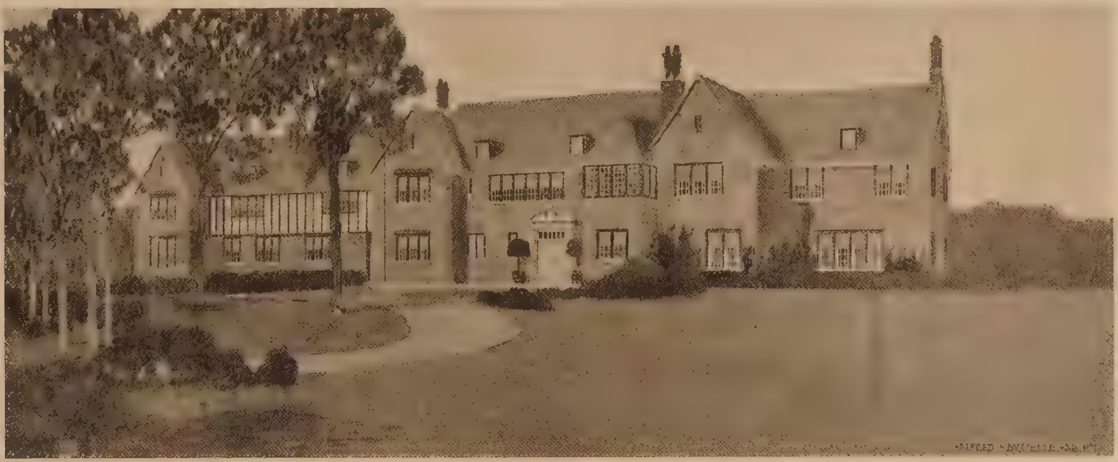
WAITING ROOM, UNION STATION, BALTIMORE

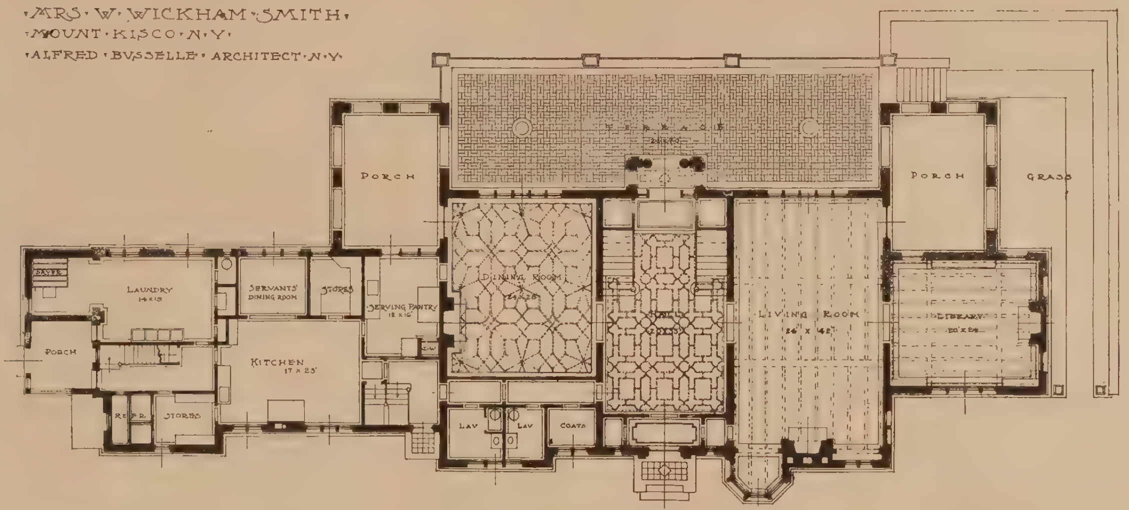
Kenneth M. Murchison, Architect.

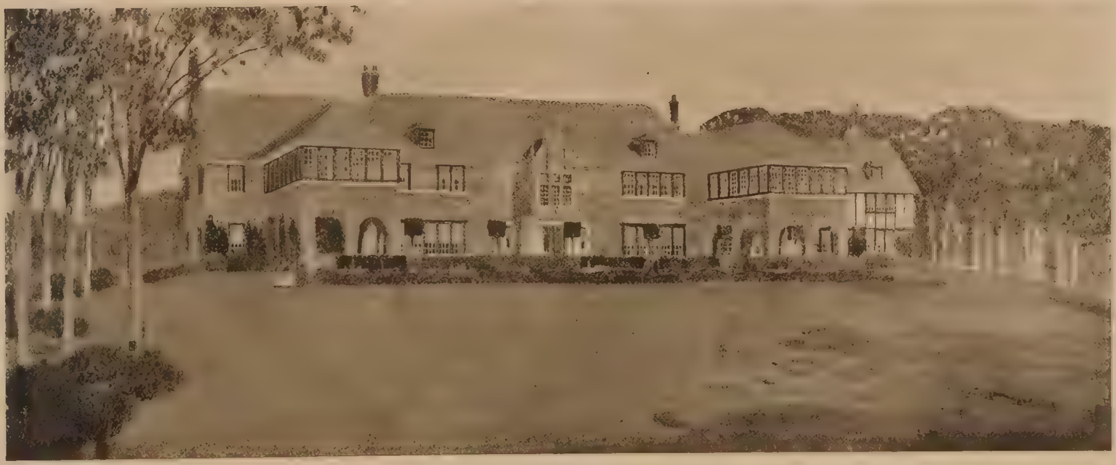


DETAIL OF CONCRETE VIADUCT AND PLAN, UNION STATION, BALTIMORE.

Kenneth M. Murchison, Architect.

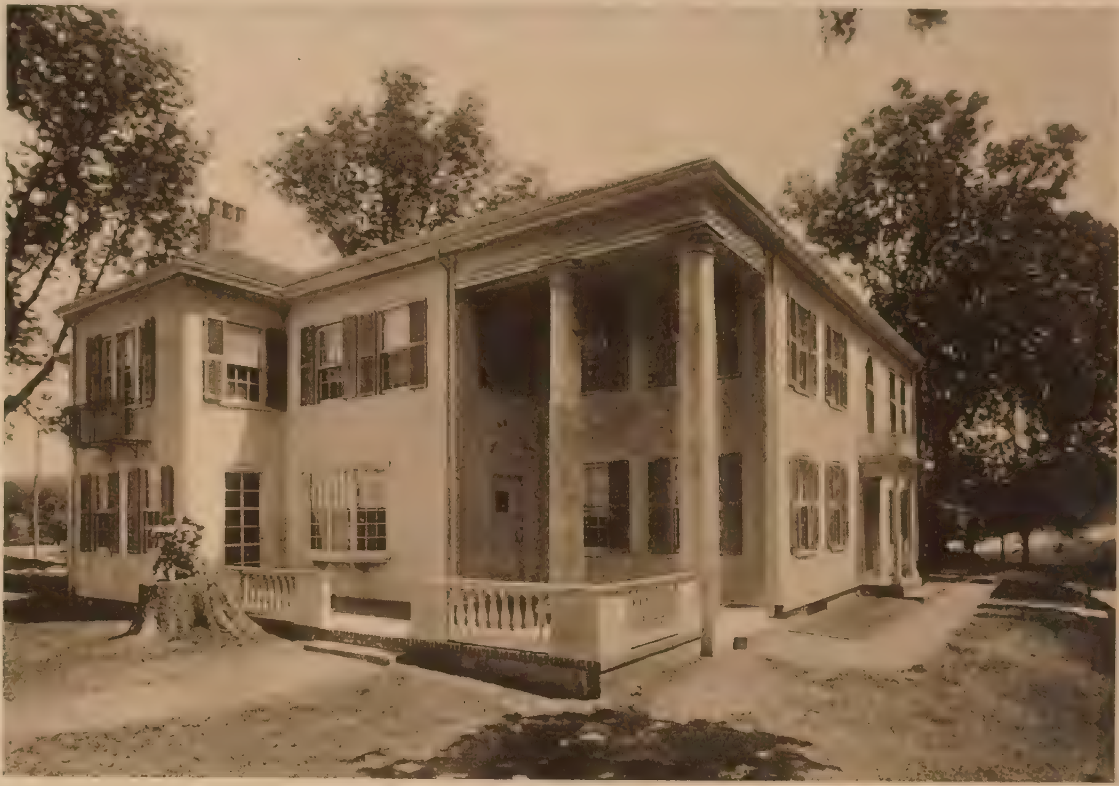


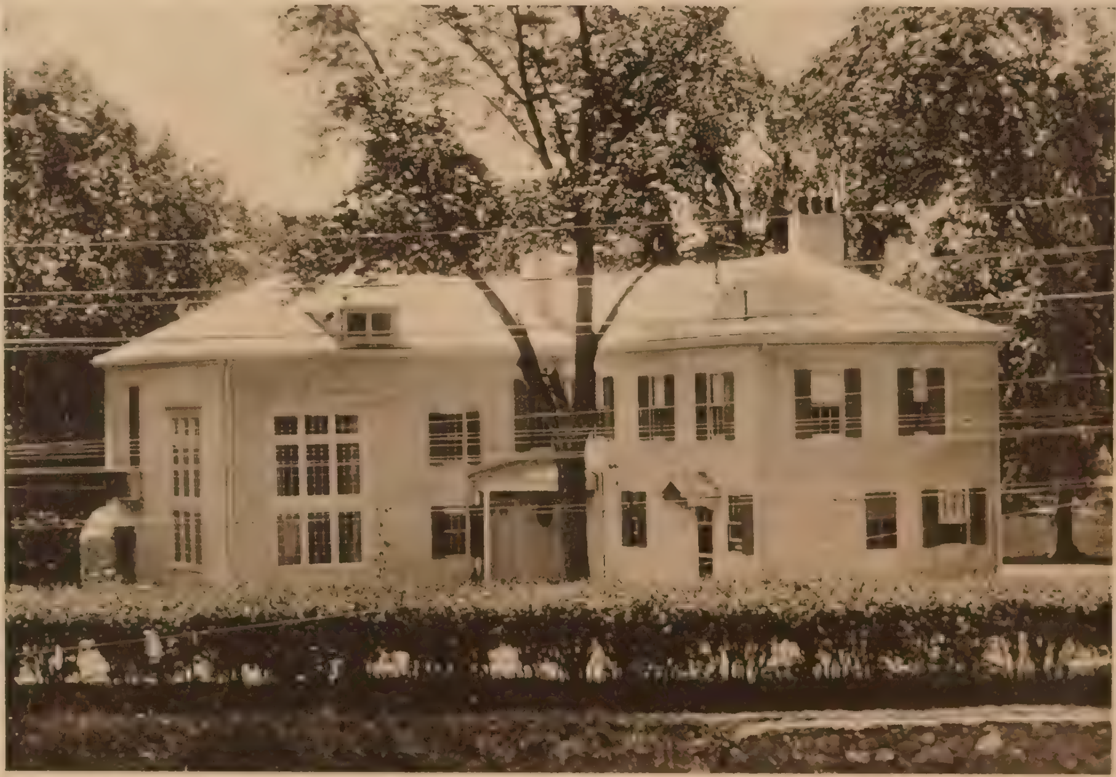




DESIGN AND PLAN FOR COUNTRY HOUSE, MRS. W. WICKHAM SMITH, MT. KISCO, N. Y.

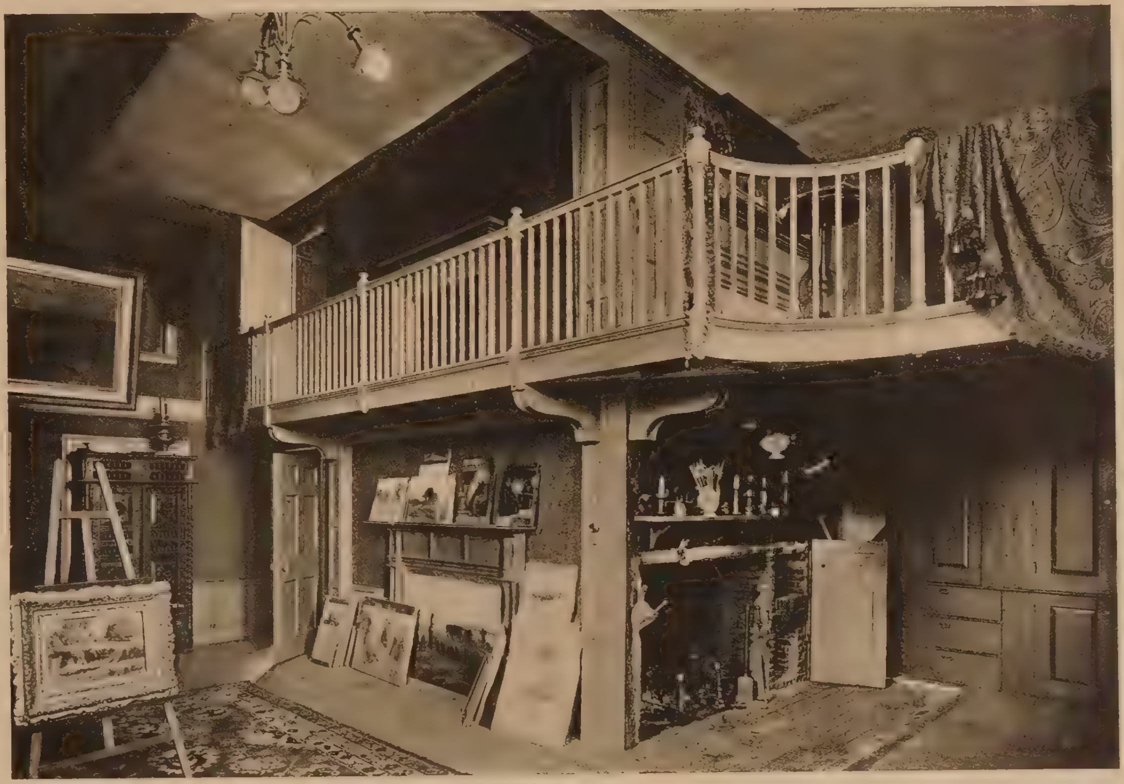
Alfred Busselle, Architect.

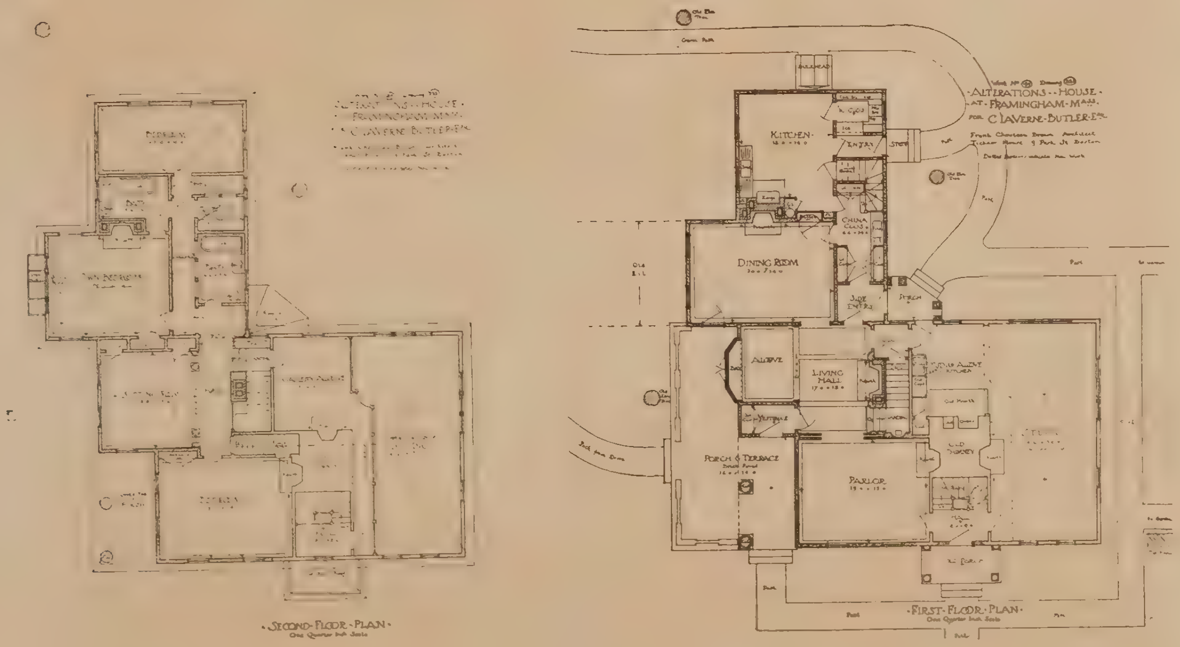




HOUSE, C. L. BUTLER, FRAMINGHAM, MASS.

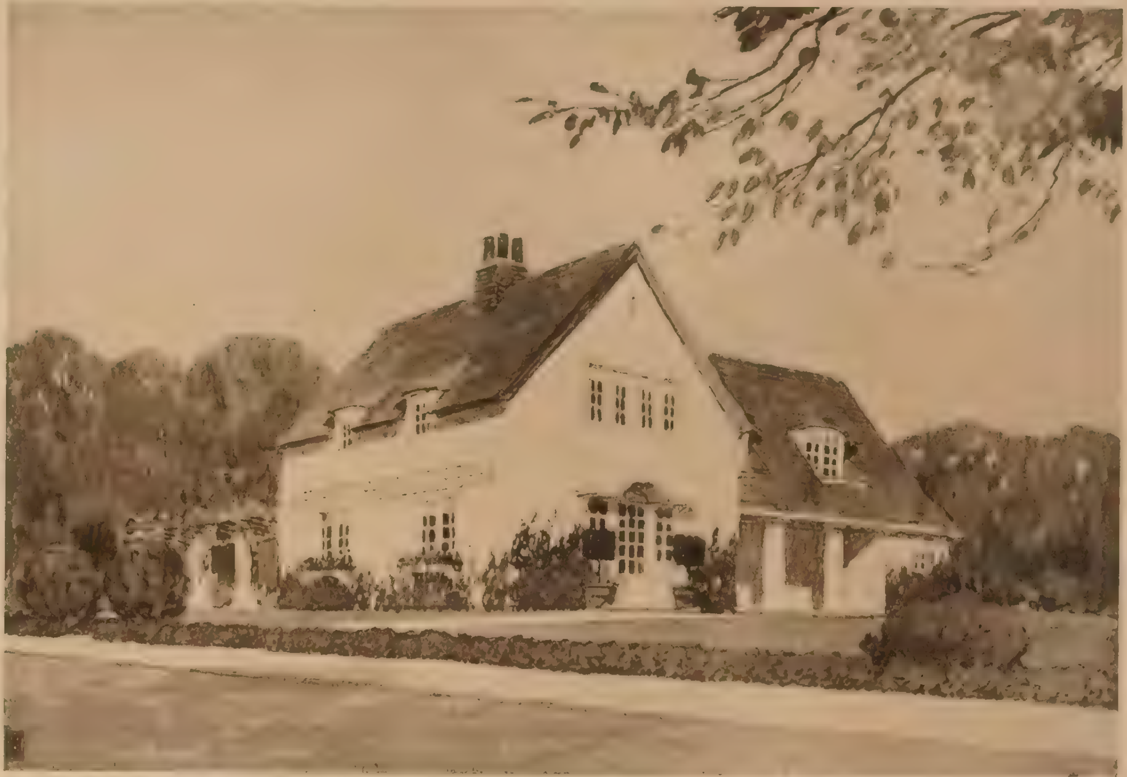
Frank Chouteau Brown, Architect.

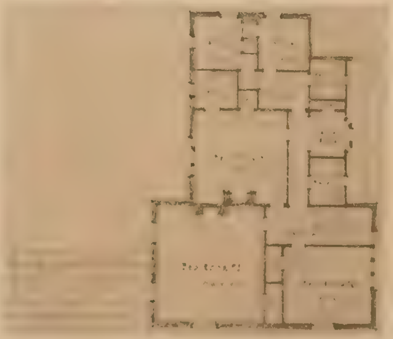


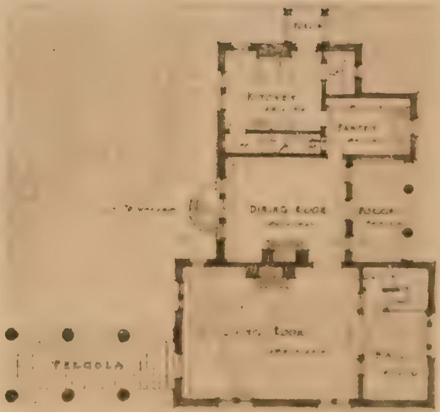


STUDIO AND PLANS, HOUSE, C. L. BUTLER, FRAMINGHAM, MASS.

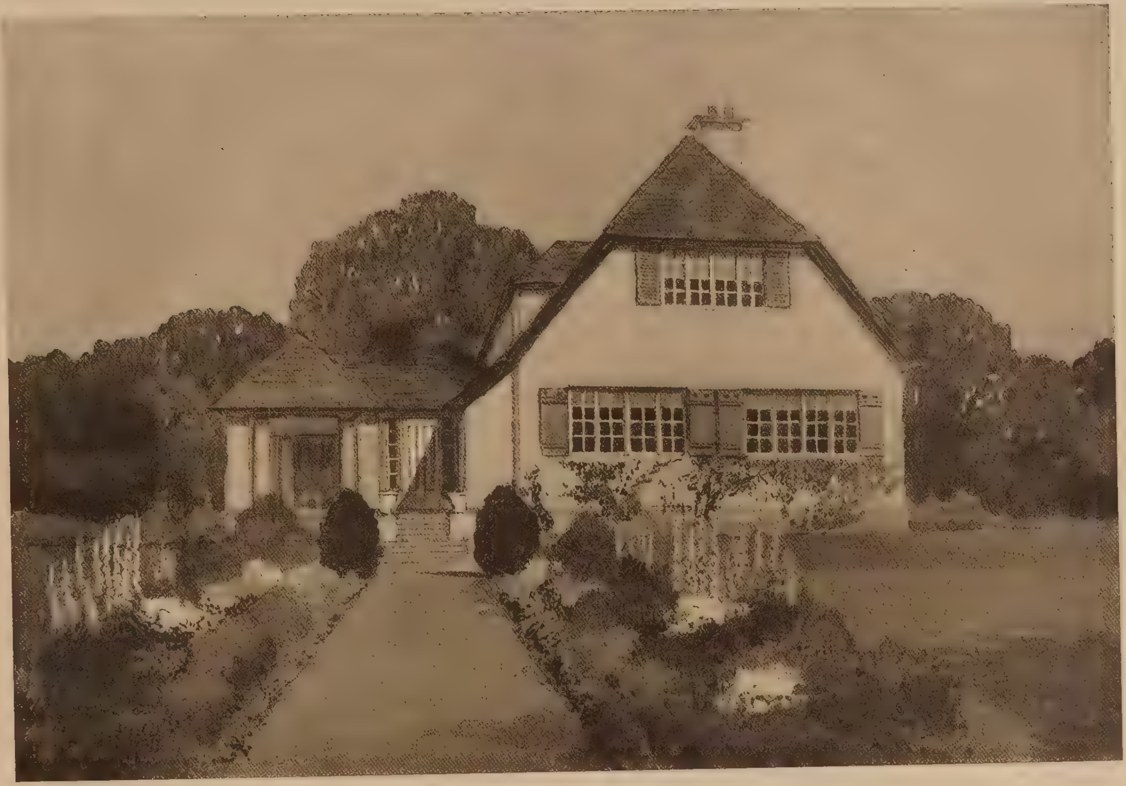
Frank Chouteau Brown, Architect.

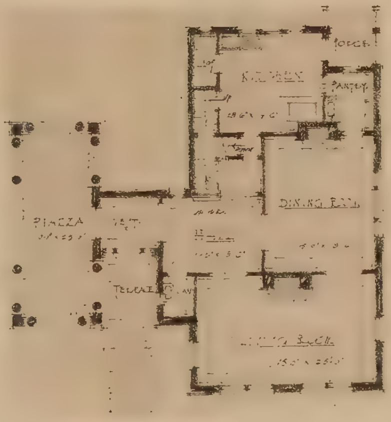


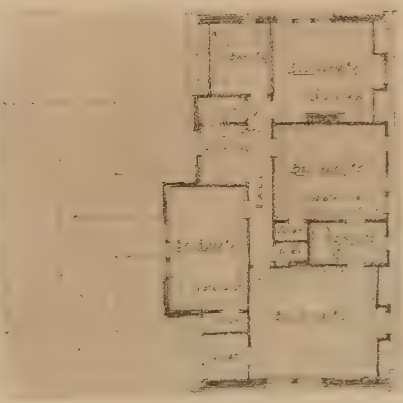




DESIGN AND PLANS FOR SMALL COUNTRY HOUSE. Aymar Embury II, Architect.

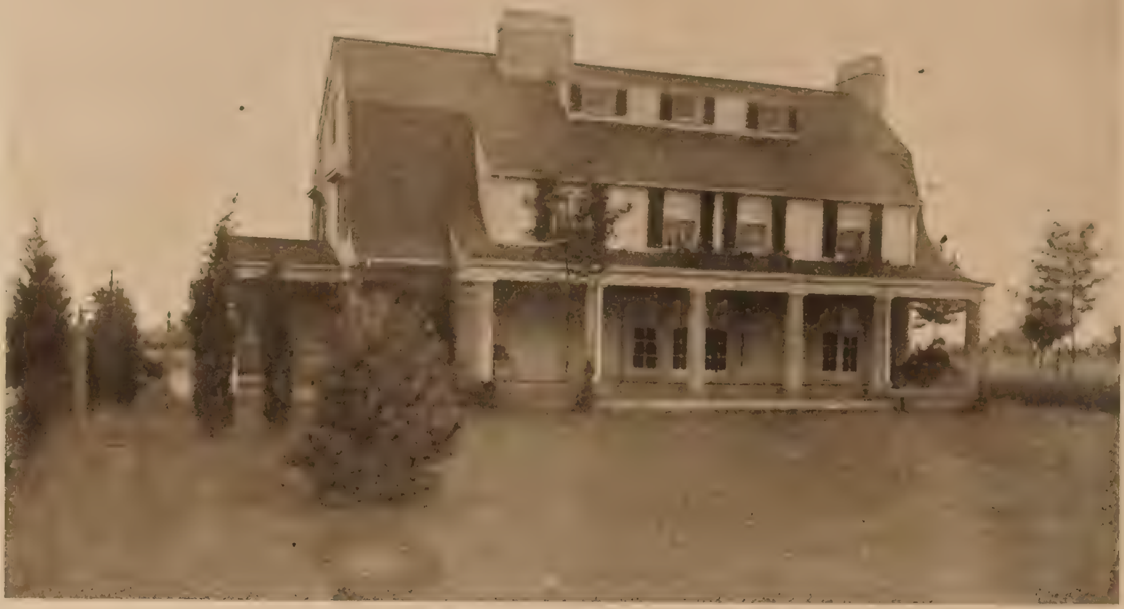


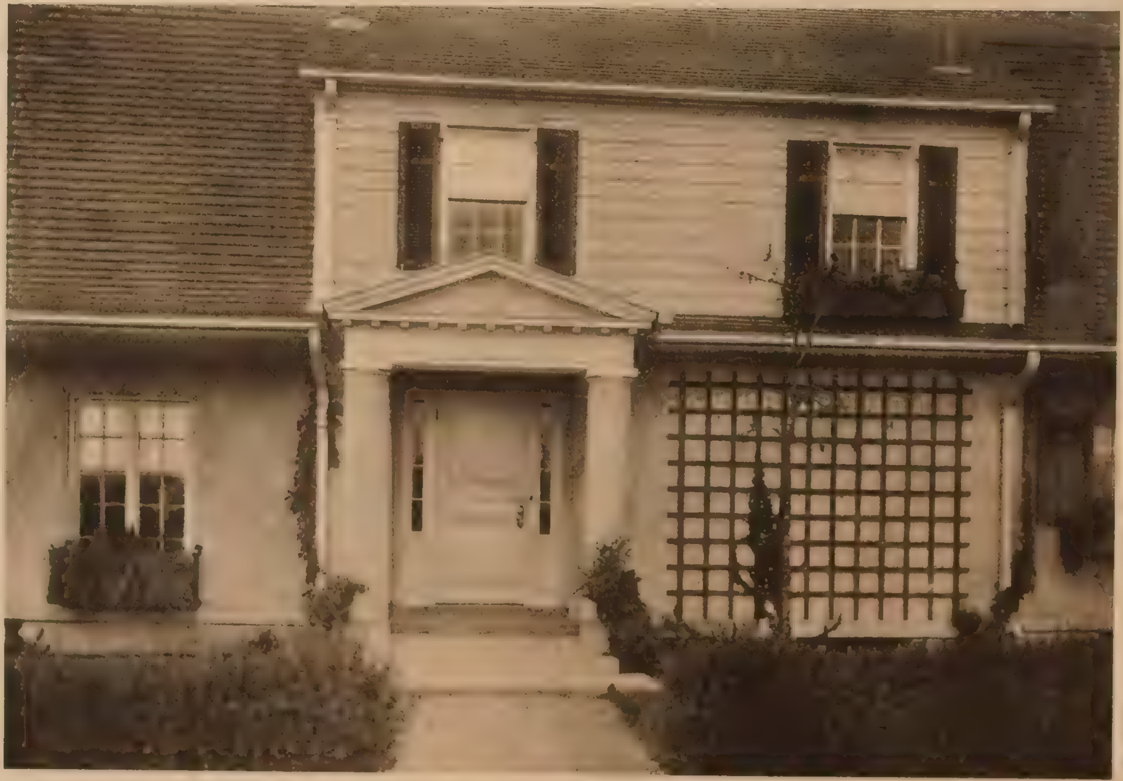




DESIGN AND PLANS FOR A SMALL COUNTRY HOUSE.

Aymar Embury II, Architect.

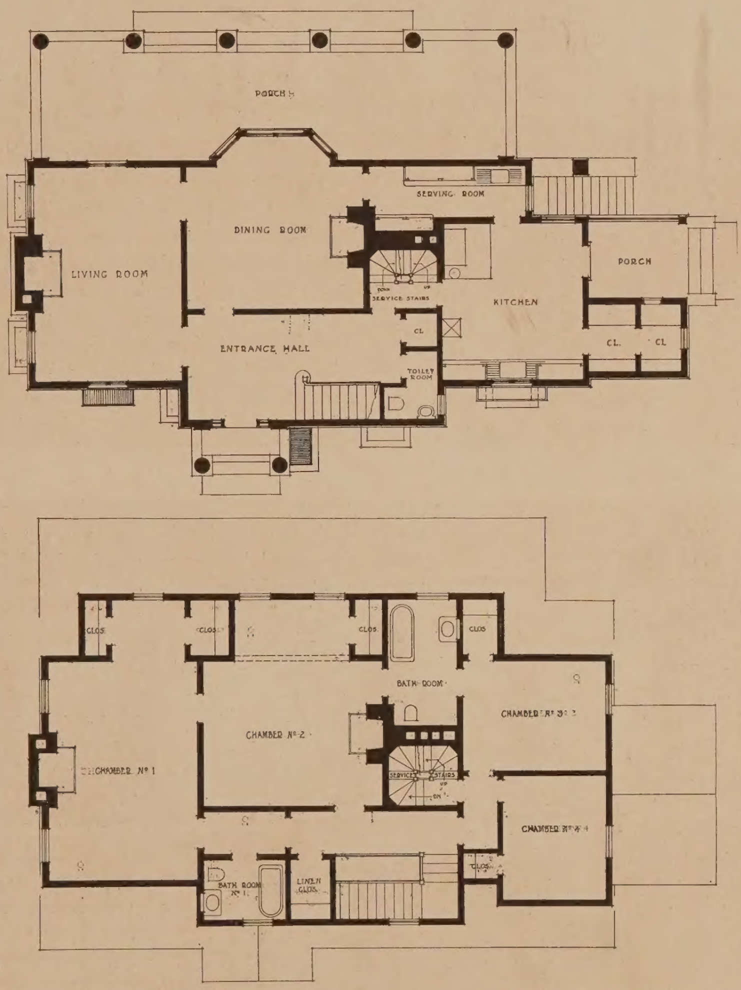




HOUSE, NASSAU BOULEVARD, L. I. Oswald C. Hering, Architect.

(*Continued from page 95*)

and 1:3 mortar; (2) the time of setting; (3) the crushing strength of mortar and concrete; (4) impact tests on concrete; (5) the modulus of elasticity of concrete; (6) the absorption of concrete; (7) the permeability of concrete; (8) bond tests; (9) the density of concrete. Some of these tests are in an incomplete state; others are contemplated, in an effort to develop those phases of the material which give most promise of practical results. The writer's excuse for publishing them in such an incomplete state is that, with his limited facilities for testing, it would require considerable time to complete the work, and, in view of the results already obtained, it seemed likely that engineers with better facilities would hasten the work through its experimental stage.



PLANS, HOUSE, NASSAU BOULEVARD, L. I.

Oswald C. Hering, Architect.

Materials: The materials used consisted of Portland cement, river sand, and ¾-inch crusher-run gneiss. Analyses of the several oils selected for use are given in Table 1. The cement complied with the specifications recommended by the Special Committee on Concrete and Reinforced Concrete. Mechanical analyses, typical of the sand and stone used, are given in Table 2. The sand contained 37 per cent of voids, the stone 43 per cent.

Method of Mixing Concrete: The weights per cubic foot of the dry sand and stone were determined, the materials being loosely shaken in a measure containing 1 cubic foot. The weight of cement was assumed to be 95 lb. per cubic foot. The percentage of moisture in the sand and stone was determined every day that a concrete mixture was made, and the proportions of sand and stone in the mixture were corrected for the moisture content. All concrete was proportioned by volume, but the materials were measured by weight. In all cases the percentage of oil used is based on the weight of the cement in the mixture. The following method of mixing was used: The proper quantities of cement and sand were mixed dry until of uniform color. Water was then added, and the mass was turned as often as was necessary to produce a rather wet mortar. The water added to the mortar was not weighed, the appearance of the mix being the criterion for determining the proper quantity. In general, however, the total quantity of water, including that in the sand, was about 17 per cent of the total weight of the cement and sand. After having mixed the mortar, the desired quantity of oil was added, and the mass was turned over as many time as was necessary to break up the oil and incorporate it thoroughly with the other ingredients. The previously moistened stone and the oil-cement mortar were then combined and turned until thoroughly mixed. The percentage of water required to make a rather soft mixture was determined from the appearance of the first batch, and every batch of the same proportions made thereafter contained the same gross quantity of water.

1:3 *Mortar*: Tests made on 1:3 mortar containing oil show that the tensile strength is influenced very little by the oils at seven days, twenty-eight days, or six months, and furthermore, there is a decided gain in strength at twenty-eight days and six months over that at seven days.

Time of Setting: The addition of oil retards both the initial and final set. Quantitative results of tests with the Gillmore needles on specimens subjected to identical conditions are given. The effect of 10 per cent of oil is to increase the time of initial set about 90 per cent, and the time of final set about 60 per cent.

Crushing Strength: Specimens of mortar and concrete were molded in cylindrical forms 6 inches in diameter and 6 inches high. The materials were deposited in the molds in layers about 2 inches thick, and were trowelled and tamped. The molds were removed after one day, but the specimens were not disturbed until the second day after molding. Air-cured specimens were kept moistened for seven days after molding. All tests were made in a universal machine having a capacity of 200,000 lbs. The bearing surfaces of all mortar specimens were bedded in several thicknesses of blotting-paper. It was found necessary to bed the top surface of each concrete specimen in plaster of Paris before testing, blotting-paper being used in addition to this bedding. The specimens were crushed at a speed of 0.152 inch per minute. The numerical results of the crushing tests are given. As would be expected with an inert substance like oil, the crushing strength decreases in general with increasing quantities of oil. In the case of the oil-mixed mortars, in only one instance is there a serious decrease of strength with the addition of oil up to 10 per cent, namely, that in which oil No. 4145 was used. At twenty-eight days, water-cured mortar specimens containing 10 per cent of oil are at least 80 per cent as strong as the plain mortar specimens. In every instance there is a substantial gain in strength at six months over that at twenty-eight days. This is equally true of the one-year specimens. Specimens cured in air are somewhat erratic in behavior. In some instances a considerable gain in strength occurs; in others a noticeable decrease. Concrete, like mortar, when mixed with oil, shows a decrease in strength, that containing 10 per cent of oil having roughly 75 per cent of the strength of plain concrete when stored in water. Air-cured concrete, mixed in proportions of 1:3:6 and 1:3:5, containing 10 per cent of oil, has 65 and 75 per cent, respectively, of the strength of the plain concrete mixtures. At the completion of the one-year tests on compression, a marked increase in strength is shown over similar tests at six months. The next tests will be made at the expiration of two years.

Toughness: Cylinders of concrete 6 inches in diameter and 6 inches high were tested in the Page impact machine under the blows of a 10 kg. hammer falling upon a 5 kg. plunger from successively increasing heights of 1 cm. The height of the last blow, causing rupture, corresponds to the number of blows. The end of the plunger in contact with the test pieces is spherical in shape, with a radius of 3 cm. The specimens were set in plaster of Paris on a piece of plate-glass, and after the plaster had hardened they were mounted in the impact machine, the bedded end on the anvil. The results of this test indicate that the toughness or resistance to impact of oil-mixed concrete differs but slightly from that of plain concrete. The impact tests were made on only one specimen from each mix. Failure was indicated by the development of radial cracks, of which there were sometimes two, and as often three. The numerical results of the impact tests are given.

Modulus of Elasticity: Tests for the modulus of elasticity were made on specimens of the usual size, 8 inches in diameter and 16 inches high. The deformations were measured with a double micrometer compressometer. The specimens were carefully bedded in plaster of Paris, a spherical bearing-block being interposed between the top of the specimen and the moving head of the machine. Loads were applied in 2,500 lbs. and 5,000 lbs. increments, and were released to the initial load of 500 lbs. after each increment of 5,000 lbs., thus permitting of the determination of the amount of permanent set. The results indicate that the addition of oil to concrete has very little effect on its stiffness, the initial modulus of elasticity, with a few exceptions, showing but little change. The effect of storing in water is to increase the modulus of elasticity to more than that of air-cured specimens, and it is as true with oil as without it.

Permanent Set: In the endeavor to discover the effect of oil on the elasticity of concrete, micrometer readings of permanent set were taken after releasing the load to its initial value of 500 lbs. In 1:3:5 concrete, containing as much as 10 per cent of oil, the permanent deformation existing after the application of 500 lbs. per square inch was less than that in the specimen containing no oil. This was true of both air-cured and water-cured specimens. The elasticity of 1:3:6 concrete appears to suffer with the addition of oil, the permanent set of the 10 per cent oil mixture, air-cured, being 0.00076 inch per inch of length, as against 0.00019 inch for the plain concrete specimens. The corresponding ratio appears to exist for the water-cured specimens. The permanent set of the 10 per cent oil mixture was 0.00017 inch after the application of 500 lbs. per square inch. Here again the beneficial effect of storing in water is well marked, the permanent set being very small for water-cured concrete when compared with that cured in air.

Absorption: In order to determine the waterproofing qualities of oil-mixed concrete compared with those of a plain mixture, absorption tests were made on 1:3:6 concrete cylinders 6 inches in diameter and 6 inches high. The cylinders were dried to constant weight in an oven, after being cured for fifteen days in air. They were then completely immersed in water, and were weighed every day until they had attained constant weight. The addition of oil decreases greatly the percentage of absorption, the cylinder containing 10 per cent of oil absoring but 1.7 per cent of water, based on the dry weight, while 6.25 per cent was absorbed by the cylinder containing no oil. In almost every case the maximum absorption was attained within one day after immersion, and, furthermore, the rate of absorption seemed to be inversely dependent on the quantity of oil added. It will be noted that there is approximately only 0.5 per cent difference between the absorption of the cylinders containing, respectively, 10 and 25 per cent of oil. The inference to be drawn from this fact is that 10 per cent of oil is nearly as effective as 25 per cent, as far as waterproofing is concerned. Four vessels of 1:3 mortar, each 2½ inches high, about ½ inch thick, and having an outside diameter of 8 inches, after hardening in moist air for one week, were immersed in water to a depth of 5 cm. Vessel No. 1 was made with no admixture of oil. A damp spot appeared inside about 1 minute after immersion. In one hour it was completely water-soaked, the moisture having climbed by capillarity above the level of the surrounding water. Within a few days after immersion, water had penetrated the plain mortar vessel until its level inside was the same as that outside. Vessels Nos. 2, 3 and 4 contained, respectively, 5, 10 and 20 per cent of oil. After an immersion of 6 months, the interiors of the oil-mixed vessels are as dry as they were on the day they were placed in the water. A corresponding series of tests was made on mortar vessels, made to contain water, with like results. The plain mortar vessel leaked, and those of oil-mixed mortar were perfectly tight. These results show with certainty the waterproofing qualities of oil-mixed mortar and concrete.

Permeability: The following tests were made on specimens of 1:3 mortar, 3 inches thick and 6 inches in diameter: Plain 1:3 mortar, at the age of 28 days, under a pressure of 30 lbs., showed dampness in about one-half hour. Under a pressure of 40 lbs., applied for 24 hours, the leakage amounted to 146 cubic cm. Specimens of the same mixture, but containing 5 and 10 per cent of oil No. 4,923, remained perfectly dry for 24 hours under a pressure of 40 lbs. A ½-inch coat of 1:3 mortar, containing 10 per cent of oil No. 4,923, applied to the surface of a very porous concrete, was absolutely effective in preventing all leakage, even under comparatively high pressure.

Bond Tests: Tests were made to determine the relative strength in bond of oil-mixed and plain concrete. Specimens were made of 1:2:4 concrete, mixed with 23½ per cent of water, based on the weight of cement and dry sand, making a rather wet mix. Rods, 12 inches long, were embedded in the center of cylinders 8 inches in diameter and 8 inches long, one end projecting about ½ inch through the bottom. The specimens were bedded in plaster of Paris on a cast-iron plate mounted on a spherical bearing block. The tests consisted in pushing the rods through the concrete, the point of failure being taken at the drop of the scale beam. Two kinds of bars were used, plain and deformed. All specimens were tested at 28 days, and the results are plotted on Fig. 8. The points plotted represent the average of two tests, which in all cases ran very closely together. The results show that the effect of oil is to decrease the bond strength, the decrease depending on the quantity of oil added. It is evident that the bond between plain bars and concrete is affected so seriously by the admixture of oil that it would be extremely inadvisable to use such a combination. The bond of deformed bars is not affected so seriously. With an admixture of 10 per cent. of oil, which is as much as is necessary to use, the bond strength is 84 per cent of that attained by the mixture containing no oil.

Service Tests: During April and May, 1910, two bridge surfaces of oil-concrete were laid at Ridgewood, N. J. In the borough of Richmond, New York City, during May and June, 1910, about 400 feet of street surface was laid with different aggregates. About 300 feet of street in Washington, D. C., was surfaced in June, 1910. Numerous inspections of this work have been made, and, up to the present time, it is all in very good condition. About ½ mile of roadway, laid with 10 per cent oil-concrete in the suburbs of Harrisburg, Pa., in the summer of 1910, is also reported to be in very good condition.

Summary of Conclusions: The following tentative conclusions as to the effect of the oils used in cement and concrete may be drawn from the foregoing investigations:

1. The tensile strength of 1:3 oil-mixed mortar differs very little from that of plain mortar, and shows a substantial gain in strength at twenty-eight days and six months over that at seven days.
2. The times of initial and final set are delayed by the addition of oil, 10 per cent of oil increasing the time of initial set by 90 per cent, and the time of final set by 60 per cent.
3. The crushing strength of mortar and concrete is decreased by the addition of oil to the mix, concrete with 10 per cent of oil having roughly 75 per cent of the strength of plain concrete at twenty-eight days. At the age of one year the crushing strength of 1:3 mortar suffers but little with the addition of oil in quantities up to 10 per cent.
4. The toughness of resistance to impact is affected but slightly by the addition of oil in quantities up to about 10 per cent.
5. The stiffness of oil-mixed concrete appears to differ but little from that of plain concrete.
6. The results of tests for permanent deformation do not indicate that a law is followed by oil-mixed concrete.
7. Oil-mixed mortar and concrete containing 10 per cent of oil have very little absorption, and under low pressures both are waterproof.
8. Oil-mixed mortar containing 10 per cent of oil is absolutely watertight under pressures as high as 40 lbs. per square inch. Tests indicate that oil-mixed mortar is effective as a waterproofing agent when plastered or painted on either side of porous concrete.
9. Bond tests show the inadvisability of using plain bar reinforcement with oil-concrete mixtures. With deformed bars the bond is not weakened seriously by the addition of oil in quantities up to 10 per cent.

A patent has been granted to the writer for mixing oil with Portland cement concrete and hydraulic cements giving an alkaline reaction. All citizens of the United States are at liberty to use this process without the payment of royalties.

A REMARKABLE RESTORATION OF THE ANCIENT CITY OF ROME MADE IN MODEL BY A FRENCH ARCHITECT, P. BIGOT.

WHAT is in all probability the finest and most minutely accurate reproduction in relief of a city that has ever been made is at present nearing completion at Rome. It represents Rome as it was in ancient times, when it stood on the very pinnacle of its development as the architectural marvel of the universe, before its wealth of temples, triumphal arches, amphitheatres, statues, and palaces had been sullied by the touch of barbarian hands.

The relief is the work of P. Bigot, a French architect. For more than ten years he has given himself up to it absolutely. Over ten years ago he won the Prix de Rome for architecture, which enabled him to study that art among the plentiful ruins which the Rome of to-day still has to show of the city that was the mistress of the world. After his term as a student was over, Bigot had become so passionately interested in the place which can evoke such memories of its days of glory that he decided to remain there and devote his whole life, if necessary, to making a worthy reproduction of its bygone magnificence. In this he has been assisted by another French architect, H. Mazet.

The reproduction is made of plaster. If any sufficiently generous patron of art should come forward in the future it may some day be cast in bronze. It shows the greatest city of antiquity as it looked in the fourth century A. D., when Constantius sat on the imperial throne—just about when that monarch, whose capital was at Constantinople, visited Rome for the first time and was thunderstruck at the grandeur of the ancient capital.

The relief measures 11 meters by 6 meters It is executed on a scale of 1 to 25,000. Besides studying thoroughly all available descriptions of ancient Rome and the extensive ruins of it scattered through the modern Italian capital, the French architect was materially helped in his work by portions of an old plan of the imperial city discovered imbedded in a garden wall which was recently dug up. Originally this plan was placed in the Roman Forum, the heart of ancient Rome, whence all roads radiated, about which Rome's sublimest buildings were ranged.

The next step to be taken by Bigot toward the completion of his task is the coloring of the myriad tiny bits of plaster which, together, reconstruct for us the ancient city. At present they are of dazzling white.

The artist has still to paint his city, bit by bit, with all the care that must be lavished on the most precious miniature. He must gild the roofs of his temples and palaces, each one a little gem in itself. He must deck with bright colors all his diminutive cupolas, all his statues, all his houses, in order that the spectator may indeed gaze on the city that the Caesars knew.

The relief shows more than one-half the surface of the city; it embraces that portion containing the historical spots and the great monuments. The only exceptions are the Thermae of Diocletian, situated too far from the center of the city, and the Praetorian Camp, already dismantled by Constantine.

From every side, no matter under what light one gazes upon it, the city constructed by M. Bigot takes on the aspect of reality. Each of its fragments has its individual physiognomy and its value in relation to the whole. The masses balance each other; what is severe is varied by what is picturesque. The freedom with which the lines of the great public monuments are treated contrasts with the congestion depicted in the poorer quarters.

With what eyes M. Bigot has looked upon all this! It seems that he has analyzed, even in its minutest parts, an organism manifesting itself under 100,000 forms—that he has reproduced its very life.

The details of the work are exquisite. Doubtless for this M. Bigot's co-laborer, M. Mazet, must share the praise. Even an insignificant cube of plaster becomes endowed with a personal character.

With what charming taste has each little temple been built! A delicate hand has, in turn, narrowed and widened the entasis of its columns, modeled their fluting, proportioned the parts of the entablature, carved foliage and festoons. Elsewhere this same hand has designed thickets and grass plots and planted around pools of water cypresses and pines. With the most exquisite delicacy the artist has, in modeling the balconies of the houses, hinted even at the innumerable garments hung out to dry on the balconies of ancient times, just as they are now. Every piece of wall, every house, be it superb or squalid, has its own life.

BOOK REVIEWS.

Concrete And Stucco Houses, Oswald C. Hering. 1912. McBride, Nast & Co., New York. Cloth $2.00 net. Postage 20 cents.

It is a good thing for the cement interests, as well as for the building public, when an architect of Mr. Hering's standing comes out so boldly as an advocate for the use of cement products in residence work. Much has been said on both sides of the question. Strong arguments have been brought forward by the manufacturers and dealers but for many years the architects seemed skeptical, timid—even antagonistic to the extensive adoption of cement in residence work. Meanwhile the individual owner was somewhat undecided. Mr. Hering's book contains many illustrations of residential work, drawings of construction details, and interesting text which imparts much useful information in a simple entertaining style.

American Country Houses Of Today, Paul Wenzel and Maurice Krakow. 1912. Preface by Frank Miles Day. Architectural Book Publishing Company, New York. Cloth. Price $12.50.

It is safe to say that in no other country and at no other time has the suburban or country house of moderate size been so rapidly multiplied as within the last decade, in the United States. A notable increase in wealth and a wider distribution of it, improved means of transit and growing love of life in the country have all combined to bring about a striking change. There certainly never was a better field for the skill of those who design houses and on the whole it must be said that they have risen fairly to the occasion. The houses shown in his book are representative of types usual at the present time along the Atlantic seaboard. It is a noticeable fact that houses of the cottage type and those of the extremely expensive class are almost entirely missing. They will probably be found in other volumes, which, it appears, the publishers intend shall follow this, widening its scope and including the work of other parts of the country. The photographic reproductions are supplemented by plans and all shown in very clear plates printed on high finished paper substantially bound.

Mechanics Of Heating And Ventilating, Konrad Meier. 1912. McGraw-Hill Book Co., New York. 161 pages, 6 x 9, illustrated, with ten large charts. $5.00 net, postpaid.

In the course of twenty-six years of activity in heating and ventilating, both in this country and abroad, Mr. Meier has accumulated a great amount of data relating to the flow of water, steam and air. All of this is obtainable elsewhere, but widely scattered in various publications, foreign and domestic, and most of it had never been put into shape for the purposes of heating engineers. The purpose in writing it has been to bring theory and practice closer together, by giving the means to calculate ducts and pipe systems by a scientific and yet practical method. Any architect or engineer who cares to obtain a certain delivery of heat or air supply with the least material and operating expense and assure accurate distribution beforehand, will find it profitable to study the book and use the charts. They represent a great amount of data that has been sifted, condensed and made ready for use.

An Architect's Sketch Book. Robert Swain Peabody, 1912. Houghton Mifflin Company, Boston and New York. Red buckram, boxed, $5.00 net. Postage 25 cents.

This is a book profusely illustrated with the reproduction of rapid pencil sketches and notes, made by the way, on various vacation journeys in different countries. Mr. Peabody is one of our representative American architects and his observations as a traveler in other lands are worthy of note. The publication has a peculiar and intimate charm which makes it attractive to the professional man or the traveler.

THE ABOVE IS A DETAIL OF THE FAIENCE TILE WALLS AND FOUNTAINS SUPPLIED BY US FOR THE INTERIOR FINISH OF THE MAIN CONCOURSE, UNION STATION, PENN. R. R. SYSTEM, BALTIMORE.
KENNETH M. MURCHISON, ARCHITECT.

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